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(54) EXHAUST GAS PURIFYING ELEMENT, PRODUCTION THEREOF AND METHOD FOR PURIFYING NITROGEN OXIDES

(57)Abstract:

PROBLEM TO BE SOLVED: To obtain an exhaust gas purifying element capable of efficiently removing nitrogen oxides from the exhaust gas of combustion, etc., containing excessive oxygen by depositing an oxide thin film on a cathode electrode of the element consisting of an electrode and a solid electrolyte.

SOLUTION: This exhaust gas purifying element is formed by depositing a crackles oxide thin film on the cathode electrode of the element consisting of the electrode and the solid electrolyte. As the oxide, CaTiO₃, LaCoO₃ SrFeO₃, multiple oxides represented by the composition of La_{1-y}Sr_yMo_{3-z} (0≤y≤1.0; 0.1≤z≤0.5; M=Co, Cu, Fe, Mn) and being substituted derivatives thereof, and YBa₂Cu₃O_{7-x} (0≤x≤0.8) are exemplified. Also the film thickness of the oxide thin film deposited on the electrode is preferably defieced as 0.1-10μm, more preferably as 0.1 to about 2.0μm.